

DRAFT
Recycling Market Development Action Plan
Massachusetts Department of Environmental Protection



June 2023

Background

MassDEP's 2030 Solid Waste Master Plan establishes a goal to reduce disposal statewide by 30 percent by 2030 (from 5.7 million tons in 2018 to 4 million tons in 2030). It also sets a long-term goal of achieving a 90 percent reduction in disposal to 570,000 tons by 2050. In the Master Plan, MassDEP committed to establishing a Recycling Market Development Workgroup and to develop a comprehensive Recycling Market Development Action Plan to guide our market development programs and strategies. The Recycling Market Development Action Plan prioritizes potential investments to address specific material market deficiencies and, where possible, advance opportunities in Environmental Justice Communities and to support the needs of Environmental Justice Populations.

MassDEP convened the Recycling Market Development Workgroup in January of 2022 to engage a broad and diverse set of stakeholders and receive input on the development of the Action Plan. Over the course of six meetings, participants exchanged information about successful market development initiatives, discussed barriers to recycling market expansion, and suggested potential solutions.

While some recycling markets are regional, national, or even international, the Action Plan is focused on increasing in-state recycling market development opportunities to support efforts to reduce our disposal, while keeping these economic development and job creation benefits within the Commonwealth. MassDEP will focus the action items in this Plan on those materials for which the in-state market development opportunities are the most significant.

In this context, the Action Plan takes a broad view of recycling. When we use the term "recycling" in this Plan, unless indicated otherwise, we are using the term broadly to encompass activities including reuse, recycling, composting, and other methods to divert materials from disposal. MassDEP will work with our Recycling Market Development Workgroup to review and assess this Plan on a regular basis and update and revise the Plan as needed.

Current MassDEP Market Development Programs

Recycling & Reuse Business Development Grants: MassDEP administers the Recycling and Reuse Business Development Grant (RBDG) program, which provides grants to businesses and non-profit organizations to advance reuse and recycling infrastructure in Massachusetts for selected targeted materials. The RBDG helps to meet the capital infrastructure needs of Massachusetts businesses and institutions.

Recycling Loan Fund: The Recycling Loan Fund is funded by MassDEP and administered under contract to MassDEP by BDC Capital. The Recycling Loan Fund helps existing or new Massachusetts businesses to finance investments to advance our reuse, recycling, and composting infrastructure. Eligibility for the Loan Fund is quite broad, including collection, sorting, processing, recycling, conversion, manufacturing, and wholesale and retail activities related to recycled feedstocks and products.

Waste Disposal Bans: The MassDEP Waste Disposal Ban regulations prohibit the disposal or transfer for disposal of specified recyclable, compostable and toxic materials. MassDEP develops and implements waste disposal bans as part of a comprehensive approach, helping to ensure a reliable supply of the

banned material and drive investment and capacity growth in Massachusetts by reuse, recycling, and composting businesses.

State Agency Recycling Market Development Council: The Executive Office of Energy and Environmental Affairs also convened a State Agency Recycling Market Development Council in January of 2022. Bringing together Secretariats including Administration and Finance, Education, Housing and Economic Development, and Transportation, the group is focused on increasing the use of recycled materials in state building, construction, and renovation projects and increasing state purchasing of recycled content products.

RecycleSmart MA: RecycleSmart MA provides guidance via a program website, social media, and partner organizations to help guide residents and businesses on what materials should and should not be placed in recycling containers. RecycleSmart MA helps to improve the quality and value of our recyclables by reducing contamination, improving quality and value of the recyclables collected.

Municipal Grants: Buy Recycled Commitments: Municipal recycling and waste reduction programs are bolstered by MassDEP's Sustainable Materials Recovery Program Grants and Recycling Dividends Program. These programs require a municipal Buy Recycled Policy as part of minimum program requirements, helping to drive demand for purchasing recycled content products.

RecyclingWorks in Massachusetts: RecyclingWorks in Massachusetts (RecyclingWorks) is a statewide commercial waste reduction assistance program fully funded by MassDEP and delivered under contract to MassDEP by the Center for EcoTechnology. While RecyclingWorks is not specifically a market development program, it works to connect Massachusetts businesses with outlets to best meet their reuse, recycling, and organics management needs, helping drive valuable materials to Massachusetts facilities.

Other MassDEP Plans: In many cases, this Action Plan connects and overlaps with other MassDEP Action Plans developed under the Solid Waste Master Plan, including the Reduce and Reuse Action Plan, the Construction and Demolition Materials Action Plan, and the Organics Action Plan.

Additional State and Regional Market Development Programs

Operational Services Division Environmentally Preferable Purchasing Program

The Operational Services Division (OSD) administers the procurement process for the Commonwealth of Massachusetts' Executive Agencies by establishing Statewide Contracts for commonly purchased goods and services. As part of their programs, OSD implements an environmentally preferable products (EPP) purchasing program that establishes specifications and contracts for recycled content and other environmentally preferable products by state agencies and political subdivisions, including municipalities.

MassDevelopment

MassDevelopment is the state's development finance agency and land bank, working with businesses, nonprofits, banks, and communities to stimulate economic growth. MassDevelopment promotes capital investment in Massachusetts by providing integrated financing and development solutions for projects

in the Massachusetts economy. MassDevelopment programs include bond financing, loans and guarantee programs, and tax credits.

Massachusetts Office of Business Development

The Massachusetts Office of Business Development (MOBD) assists businesses relocating to Massachusetts as well as businesses wishing to expand their current operations, with specific attention paid to jobs created, jobs retained, and capital invested. MOBD provides a highly responsive, central point of contact that facilitates access to resources, expertise, and incentive programs.

MassHire Department of Career Services

MassHire Career Centers help Massachusetts businesses find qualified workers and provides job seekers with career guidance as well as referrals to jobs and training. These programs can help companies in the recycling industry more effectively fill their workforce needs where they have gaps.

Massachusetts Technology Collaborative

Massachusetts Technology Collaborative (MassTech) is a public agency that supports business formation and growth in the state's technology sector. MassTech strengthens the competitiveness of the tech and innovation economy by driving strategic investments, partnerships, and insights that harness the talent of Massachusetts.

NERC and NEWMOA

The Northeast Recycling Council, Inc. (NERC) is a multi-state non-profit organization committed to environmental and economic sustainability through responsible solid waste management. Its programs emphasize source reduction, reuse, recycling, composting, environmentally preferable purchasing (EPP), and decreasing the toxicity of the solid waste stream in Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey New York, Pennsylvania, Rhode Island, and Vermont. It has both state members, who are voting members, non-voting Ex Officio Board members, and non-voting Advisory members that represent multiple interests and perspectives in the recycling industry.

The Northeast Waste Management Officials' Association, Inc. (NEWMOA) is a non-profit, nonpartisan interstate association whose membership is composed of the state environmental agency directors of the hazardous waste, solid waste, waste site cleanup, emergency response, pollution prevention, and underground storage tank programs in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

Given the synergies between NERC and NEWMOA's interests, memberships, and activities, the two organizations collaborate extensively.

Plan Structure

The recommended action items in this Plan are divided into three sections:

1. Business Support and Economic Development Strategies to Expand Recycling Market Infrastructure

2. Strategies to Build Demand for Recycled Products

3. Research and Development Strategies for Products, Equipment, and Technologies

Each section below includes an introduction explaining the set of strategies, followed by a table listing MassDEP's proposed action items for that section of the Plan. The table includes columns for Status and Time Frame. These two columns are defined as follows:

Status – typically described as either “ongoing” or “not yet started.” Where there is a specific one-time action item, that will be marked as “complete” where appropriate.

Time Frame – Action items in the Plan are assigned a time frame for when they will be implemented, as follows:

- Short term – 1-2 years (if the action item is an ongoing program, it will continue beyond the 1-2 year time frame.)
- Medium term – 3-4 years
- Long Term – 5 years or more

These time frames are established to ensure MassDEP has adequate staffing and financial resources to support and develop each action item, recognizing that we will not be able to implement all of these action items at one time.

Section 1. Business Support and Economic Development Strategies to Expand Recycling Market Infrastructure

Problem Statement: Many businesses in the reuse, recycling, and composting sector are small businesses with limited access to capital funding. Providing grant and loan programs can help to fill this gap. These business owners may also need assistance and guidance with business planning and financial strategies, including how to develop and submit high quality grant applications. Minority-owned businesses or business owners who speak English as a second language may particularly benefit from more assistance in these areas. Businesses in this sector also face challenges in hiring the staff they need, particularly for technical and mechanical positions. Recycling businesses sometimes face challenges with high levels of contamination in the recycling streams that they receive.

Section Summary: This section is focused on supporting the growth of existing recycling businesses in Massachusetts, while also supporting development of new businesses. Proposed action items focus on the concerns mentioned above, including:

- Delivering grant and loan funding to help businesses meet capital funding needs.
- Connecting business owners and managers with business planning guidance and assistance.
- Ensuring the opportunities in this Plan are marketed and communicated to minority-owned businesses and businesses in Environmental Justice communities.
- Partnering with state workforce development and job training programs to help expand the workforce for recycling businesses.
- Implementing initiatives to reduce or better manage contaminants in incoming streams.

Evaluation and Assessment: Evaluation metrics for this section include:

- Recycling infrastructure and jobs created through grant and loan programs
- Number of businesses supported through training programs and assistance
- Grant applications from minority-owned and other certified businesses through the State's Supplier Diversity Office
- Reductions in residual levels at materials recovery facilities accepting single-stream recycling

Action Item	Status	Time Frame	Notes
Continue to provide Recycling & Reuse Business Development Grants and access to Recycling Loan Fund to grow in-state infrastructure for targeted materials	Ongoing	Short term	Limited to capital equipment
Launch Waste Reduction Innovations Grant program to supplement RBDG program	Not yet started	Medium term	Provide funding for investments that may not fit RBDG program structure such as startups, research, and product testing
Connect recycling businesses to webinars/workshops on business planning, grant writing and financial analysis	Not yet started	Short term	Focus on resources offered by Mass state and regional agencies
Provide guidance on how to start a recycling business in Massachusetts	Not yet started	Short term	Include grants, loans, and applicable permit requirements
Connect recycling businesses with financial and technical assistance offered through State and Regional Economic Development Organizations	Not yet started	Medium term	Funnel businesses to EDCs and educate Centers why/how they should work with these businesses. Identify potential tax credits, bond financing, etc.
Emphasize program outreach and marketing to minority-owned businesses and businesses in EJ	Ongoing	Short term	Partner with the Operational Services Division's

communities and connect these businesses with assistance resources			Supplier Diversity Office and other business organizations representing and supporting these businesses. Examples: MA Small Business Development Center, Center for Women and Enterprise, Veterans Business Outreach Center, etc.
Connect recycling businesses to MassHire Career Centers and other state Workforce Development programs to help recruit applicants	Not yet started	Short term	Current need for skilled equipment maintenance and drivers
Continue to deliver messages on how to properly separate materials for recycling through the RecycleSmart MA program to reduce contamination in recycling streams	Ongoing	Short term	Expand growth of partner organizations for high contamination generator sectors
Connect with Reduce & Reuse Action Plan to grow reuse infrastructure	Not yet started	Medium term	
Continue to monitor recycling market development programs in other states to refine and add strategies in the future	Ongoing	Medium term	Including conferences, webinars, and participation in regional forums like NERC

Section 2. Strategies to Build Demand for Recycled Products

Problem Statement: Building demand for recycled products involves both demand and supply issues. In conversations with state agency purchasing officials, they have interest in purchasing recycled content products if those products can meet three tests – consistent quality, competitive price, and adequate and reliable supply. Once a product and product supplier can meet those standards, it is much easier to focus on building demand. To further grow markets, it is also important to leverage purchasing by local

governments, the private sector, and individual consumers. In some cases, building demand may require the ability to try or test a product before committing to purchasing it for the long run and at a large scale. Businesses that manufacture recycled content products may need assistance helping to verify product performance and quality, or to test products for specific applications. Certain policy and legislative drivers may also help to build demand for recycled products.

Section Summary: This section is focused on building demand for recycled products by increasing use of recycled content feedstocks in production and packaging and driving increased purchasing of recycled content products. Building demand is closely tied to and dependent on collecting and providing a consistent, high volume of supply to support investments in producing recycled content products and packaging. Therefore, this section also references some critical initiatives to increase the supply and improve the quality of recycled content feedstocks. While legislative approaches may take longer to develop, this section also highlights several legislative approaches that could help build demand for recycled products and packaging.

Evaluation and Assessment: Evaluation metrics for this section include:

- Amount of recycled content products purchased through state contracts
- Measures of engagement through outreach activities and workshops
- Results of pilot purchasing projects

Action Item	Status	Time Frame	Notes
Engage other state agencies on purchasing recycled products through State Agency Recycling Market Development Workgroup	Ongoing	Short-term	
Use the RecycleSmart MA program as an outreach channel to promote purchasing of recycled content products and packaging	Not yet started	Medium term	Improving quality of recyclables collected can also drive increased demand
Hold workshops to provide guidance to businesses on opportunities to purchase recycled content products and connect business purchasers with recycled product manufacturers and retailers	Not yet started	Medium term	Develop improved web page and resources for Business Buy Recycled initiatives
Initiate conversations with recycling processors and manufacturers about barriers to using recycled feedstock and needs for quality, volume and price	Not yet started	Medium term	Examples: Industry associations, Sustainable Purchasing Leadership Council

Provide funding for pilot projects utilizing recycled materials. Focus on construction-related materials, including used building materials.	Not yet started	Medium term	Focus on state agencies and municipalities
Engage legislators in potential strategies to build demand (such as minimum recycled content laws, tax credits, and expanded bottle deposit law)	Not yet started	Long term	Including Zero Waste Caucus
Connect with MassDEP's Deconstruction Workgroup to build demand for used building materials	Ongoing	Short term	
Continue meetings of the Recycling Market Development Workgroup to identify specific opportunities to build demand for recycled content products	Not yet started	Short term	
Explore regional partnerships, i.e. working with neighboring New England states to identify opportunities to build demand on regional scale	Ongoing	Short term	Utilize NERC, NEWOMOA, Economic Development Centers

Section 3. Research and Development Strategies for Products, Equipment, and Technologies

Problem Statement: Some markets and applications for recycled feedstocks are well established and do not require significant research and development work. In other cases, further research and development work may be needed to help build stronger markets. Companies developing new products, applications or technologies may lack the experience, capability, or funding to conduct this research and development work. Massachusetts colleges and universities, particularly state higher education facilities, may be underutilized in this area.

Section Summary: This section focuses on how research and development work can help to advance recycling market development. The work in this section focuses on several different aspects of recycling market development, including:

- Improvements in sorting and processing equipment and technologies to separate higher quality feedstocks
- Developing the ability to produce products that have proven successful at “lab scale” at a commercial scale
- Testing recycled content feedstocks to verify they meet applicable industry specifications
- Developing new and previously untested applications for recycled content feedstocks
- Encouraging design of products/packaging for reuse or recyclability

Evaluation and Assessment: Evaluation metrics for this section include:

- Development of in-state network of research program capabilities and areas of expertise
- Results of supported research projects, including new product applications, development of improved processes and technologies, and verified product or process performance

Action Item	Status	Time Frame	Notes
Discuss potential partnership for collaborative project funding with the Massachusetts Technology Collaborative	Not yet started	Medium term	Begin discussions in short term – potentially implement initiative in medium term
Utilize Massachusetts’ college and university system to kickstart research and development on material recycling processes, applications, and design for reuse or recyclability	Ongoing	Medium term	Focus: how to increase efficiency, economic viability
Testing new recycled content products/applications/technologies through Innovations Grant program	Not yet started	Medium term	Could fund assistance through State higher ed system or other contracted service providers
Support business incubator programs through Innovation Grants	Not yet started	Medium Term	Leverage other funding and investment opportunities, such as foundation funding.
Connect/target research and development projects with other MassDEP action plans, including Reduce & Reuse, Construction and Demolition Materials, and Organics	Not yet started	Short term	